

REMARKS

I. Status of Claims

Claims 1-53 are present in this application and pending on the merits.

II. Rejections under 35 U.S.C. § 103(a)

A) Lyons

The Office has rejected claims 1, 5-17, 19-43, and 47-53 under 35 U.S.C. § 103(a) as allegedly being obvious based on WO 00/66510 to Lyons et al. ("Lyons"). The Office states that "[t]he reference differs from Applicant's recitations of claims by not disclosing identical ranges. However, the reference discloses 'close' ranges, and close ranges have been held to establish prima facie obviousness." Office Action at 3. For at least the reasons already of record, as well as those presented below, Applicant respectfully traverses the rejection.

Questions regarding obviousness under 35 U.S.C. § 103(a) are resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 U.S.P.Q. (BNA) 459, 467 (1966); *see also KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 U.S.P.Q.2d 1385, 1391 (2007) ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls."). In making such determinations, the Office must consider each prior art reference relied on in a rejection "in its entirety, i.e., as a whole, including

portions that would lead away from the claimed invention.” M.P.E.P. § 2141.02(VI) (citation omitted).

Applicant respectfully submits that the claim rejection fails to adhere to the guidance of the M.P.E.P. with respect to obviousness based on assertions of close ranges. According to the M.P.E.P., “a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties.” § 2144.05(I) (emphasis added). Applicant respectfully submits that one skilled in the art would not have expected the compositions recited in independent claims 1, 19, 35, 36, and 38 of the present application to have the same properties as the compositions disclosed in Lyons.

Not only does Lyons fail to teach the use of a ground calcium carbonate having a particle size distribution steepness factor “ranging from about 30 to less than 38,” as recited, *inter alia*, by each of the pending independent claims 1, 19, 35, 36, and 38, but Lyons actually teaches away from the use of such a ground calcium carbonate—teaching that ground calcium carbonates having steepness factors in the claimed range “from about 30 to less than 38” would not have the same properties as those taught by Lyons (ground calcium carbonates having a particle size distribution steepness factor “greater than about 38”), and further, that such ground calcium carbonates in accordance with the claimed range would be unacceptable. For at least these reasons, a *prima facie* case of obviousness has not been established.

Furthermore, this is not a situation in which the specification of Lyons contains a very broad disclosure relating to ranges, where only the specific embodiments in the examples teach away from the range recited in the claims of the present application. Rather, taken as a whole, Lyons teaches away from the range recited in the claims. Where Lyons discloses the possible use of a ground calcium carbonate, Lyons teaches that the carbonate should have a “steep” particle size distribution (*see, e.g.*, Abstract; page 5, lines 3-11; page 6, lines 15-21; page 7, lines 19-21; page 13, lines 3-9; page 18, line 29 to page 19, line 2), that the steepness must be “greater than about 38” (*see, e.g.*, page 8, lines 12-17; claim 1), and “preferably greater than about 40” (*see, e.g.*, page 8, lines 12-17; claim 11). Moreover, as previously explained¹, Lyons expressly discloses that examples comprising ground calcium carbonates with steepnesses within the range from about 30 to less than 38 (GCC B = “about 30” and GCC C = “about 36”) are inferior and/or unacceptable, as compared to compositions comprising ground calcium carbonates having steepness “greater than about 38,” such as those disclosed in Lyons. *See* Examples 1 and 5-8.

Taken as a whole, Lyons teaches that ground calcium carbonates having a particle size distribution steepness factor as recited by the pending independent claims (“ranging from about 30 to less than 38”) would not have the same properties as those taught by Lyons (“greater than about 38”), and would be inferior and/or unacceptable. For at least these reasons, a *prima facie* case of obviousness has not been established.

At least because each of claims 5-17, 20-34, 37, 39-43, and 47-53 depends from a corresponding one of independent claims 1, 19, 36, and 38 they are also not rendered

¹ See Applicant's Amendment dated December 23, 2008, at page 15.

obvious by Lyons. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 5-17, 19-33, 35-43, and 47-53 under 35 U.S.C. § 103(a) based on Lyons.

B) Lyons in View of Nishiguchi

The Office has rejected claims 2-4 and 18 under 35 U.S.C. § 103(a) as allegedly being obvious based on Lyons in view of U.S. Patent No. 5,879,442 to Nishiguchi et al. ("Nishiguchi"). The Office admits that Lyons is silent with regard to the ratio of the amount of GCC to PCC, but believes that Nishiguchi teaches the claimed ratios and that it would have been obvious to the skilled artisan to have combined the teachings of Lyons with the ratio of Nishiguchi. See Office Action at 6. For at least the reasons already of record, Applicant respectfully traverses the rejection.

In particular, whatever Nishiguchi may teach about the ratio of GCC to PCC in a paper coating composition, like Lyons, Nishiguchi fails to teach or suggest at least a composition comprising GCC having a psd steepness factor ranging from about 30 to less than 38 in combination with a PCC having a psd steepness factor ranging from about 55 to about 75, as claimed. Nor does Nishiguchi recognize the surprising synergistic effect achieved by the subject matter recited in the claims. Therefore, the combination of Lyons and Nishiguchi fails to render claims 2-4 and 18 obvious under 35 U.S.C. § 103, and Applicant respectfully requests that the rejection of claims 2-4 and 18 be withdrawn.

C) Lyons in View of Lorusso

The Office has rejected claims 44-46 under 35 U.S.C. § 103(a) as allegedly being obvious based on Lyons in view of U.S. Patent Application Publication No. US 2005/0126730 to Lorusso ("Lorusso"). The Office appears to admit that Lyons does not teach a kaolin with a shape factor of greater than about 30, but asserts that it would have been obvious to one of ordinary skill in the art to combine the high shape factor kaolin of Lorusso with the composition of Lyons. See Office Action at 7. For at least the reasons already of record, Applicant respectfully traverses the rejection.

In particular, whatever Lorusso may disclose about the shape factor of kaolin, Lorusso also fails to remedy the above-outlined deficiencies of the claim rejection based on Lyons. Like Lyons and Nishiguchi, Lorusso does not disclose a composition comprising GCC having a psd steepness factor ranging from about 30 to less than 38 in combination with a PCC having a psd steepness factor ranging from about 55 to about 75, as claimed. Indeed, where Lorusso does discuss steepness, it describes a calcium carbonate component having a steepness factor of "at least 40, preferably at least 50, especially at least 60" (above the claimed steepness factor range for GCC in the pending claims). See Lorusso at para. [0023]. Therefore, the combination of Lyons and Lorusso also fails to render claims 44-46 obvious under 35 U.S.C. § 103, and Applicant respectfully requests that the rejection of claims 44-46 be withdrawn.

III. Conclusion

For at least the above-outlined reasons, Applicant respectfully requests reconsideration of this application, withdrawal of the claim rejections, and allowance of pending claims 1-53.

Applicant respectfully submits that the Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicant respectfully declines to automatically subscribe to them.

If the Examiner believes that a telephone conversation might advance prosecution, the Examiner is cordially invited to call Applicant's undersigned attorney at (404) 653-6430.

Please grant any extensions of time required to enter this Request and charge any additional required fees to our Deposit Account 06-0916.

Respectfully submitted,

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